THE

# VETERINARY JOURNAL

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## THE LATE MR. ALEXANDER LAWSON, J.P., F.R.C.V.S.

AT the age of 74 one can afford to look back, and few men can look back on better work done to further the social progress of the veterinary profession than Mr. Alexander Lawson. Graduating in 1872 at the Dick College, he was elected to the Council of the R.C.V.S. in 1893, and held office without intermission until last year, when ill-health forced him to retire. Elected president in 1901 and 1902, his years were characterised by the smooth running of the machinery of his office, due largely to the tact and cool judgment of the occupier of the chair; and it is well known that, although everyone did not agree with his views, he never made an enemy. His reputation for good, sound, judgment gained for him the universal support of his colleagues in the North and Midlands, and there was never any doubt as to the result of the poll where Mr. Lawson was a candidate. In the Lancashire Society (his home county) he was an especial favourite, and was honoured by election as their President.

No veterinary surgeon was better known or more deservedly popular in Manchester and district, and for twenty-four years he was a magistrate for the County of Lancashire. A member of the Urban Council for Ashton-on-Mersey, elected in 1895, he twice filled the office of chairman, and for many years he was chairman of the Highways Committee.

The large and influential gathering to pay the last respects at his funeral showed very plainly the high esteem in which his memory was held, and as an example to others of our profession his name may well be handed down as one who did his duty to his profession and to his fellow-men.

## Editorials.

### HOW DO WE STAND AS A PROFESSION?

RECENT remarks in the lay Press might be taken to indicate that, as a profession, and as a body of professional men, the veterinary world is in a very parlous state, and, indeed, at a very low ebb, and right down the ladder.

When the laity publicly talk like this it cannot be quite ignored, although, at the same time, they often talk in ignorant fashion and make statements much exaggerated. What they say should certainly have consideration, and then, if after examination of ourselves we find absolutely clean sheets we may take no further notice. Can we at the present time say that we hold a clean sheet?

It resolves itself into three headings :—

1. How do we stand as a profession in regard to ourselves?
2. How do we stand in comparison to the other learned professions?
3. How do we stand as a profession in the eyes of the public?

To the first, each and every individual one of us can, and must, give his own answer. If still keen and a supporter of his local association (and, through this, of the parent body, the National), a reader of the current journals, and, what is more to the point, an occasional contributor, he may rest assured that all will be right between himself and his profession. He need have no fear. Starting in the right place, he will make, and keep, a good average living in the life he likes and has selected to follow; and he may even put by a competency for old age. Thereby he will have done his duty to himself, to his family, his profession and the world. A well attained and worthy object.

To the second point we emphasise that, in comparison to the other learned professions, we can put up as high a proportion of clear minded, well informed, and well educated men as can any other. It is our isolation and the distances we are apart from one another which make us unable to come out daily into the limelight. We are not heard of every day like the lawyer and certain other men. Our paths lie in a different direction, but we are just as essential and just as useful to the community.

To the third question our answer is that each individual member of our profession makes his own social position and the position he holds in the eyes of the public. It always has been so, and always will be so, and the sooner our graduates understand this the better it will be for them. *Each must make his own position and his own social standing*, and that he can do it by his skill, his unfailing

courtesy, and his own personal tact and manner, we have daily evidence in the lives of men who are around us, and who shine out as examples to the younger graduates to imitate and do likewise.

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## WAKEN UP!

At a recent meeting of the Propaganda Sub-Committee of the British Medical Association the report of the Financial Secretary showed that no less than 856 new members had joined the Association between June 21 and October 6, 1921, 123 members paid arrears of subscription, and 15 resignations were withdrawn. Resignations numbered 88, and there were 70 deaths. The sum total gave a total membership on October 6, 1921, of 23,634, as compared with 22,798 on June 20.

As stated in the *British Medical Journal*, the official organ of the Association, "such figures speak for themselves."

It is a worthy example of what can be done in a "live" profession, and the figures are worthy of comparison as to whether we are in as good a case. True, the medical profession is numerically very much in excess of ours, but proportionately the number of active members is greater, and it ought not to be so.

*Our National Veterinary Association and its official Journal ought to be as well supported, proportionately, as is the British Medical Association, and it will be, too, when once the profession has shaken off its apathy. It is entirely our own fault in this, as in other matters, that it is not so, and we have only to refer to the correspondence columns of this issue to see even laymen are not oblivious of the fact; and very often the members of our profession who do the least for their fellow-men make the most complaint.*

The remedy lies with ourselves, and if we will but act up to our motto, "Vis Unita Fortior," and each "waken up" and put his shoulder to the wheel, we cannot possibly fail to command, every one of us, an income and a social position worthy of a learned profession. Unfortunately, it is largely by the amount of income we make and the social position we occupy that the public judge us and the profession to which we belong; and, after all, the public are in most instances of necessity, our judges.

We have it in us, and the skill of our profession is necessary for the welfare of the agricultural community and the whole animal world. Let us then start the year each promising to *do* something for himself and his profession; not forgetting that in our union lies our strength, and that by each federating himself with the parent body and by spreading the knowledge his experience has acquired to his fellow practitioners he is benefiting not only the world in general but himself in particular.

## General Articles

### THE OFFICERS' TRAINING CORPS. WITH SPECIAL REFERENCE TO VETERINARY CONTINGENTS.

By Major-General Sir J. MOORE, K.C.M.G., C.B., F.R.C.V.S.

"The rank is but the guinea's stamp,
The man's the gowd for a' that."—*Burns.*

A certain amount of doubt would appear to shroud the origin and the originator of the idea of the Officers' Training Corps. Colonel Earle, Deputy Director of Staff Duties, War Office, in a lecture given at the Royal United Services Institution, London, on Wednesday, November 30, attributed the idea to the poet Milton, who, 250 years ago, in his noble letter "Of Education," defined "a complete and generous education" as one "which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war." By similar reasoning we may carry the idea still further back in point of time and halt at those glorious mediæval days of Crusaders and of Knights and Squires, where the very attributes of soldierly education mentioned by Milton were so aptly applied, where Chivalry, the very essence of "an officer and a gentleman," was the order of the day, and where, in popular phraseology, "to win their spurs" was the aspiration of youth. And so, to aid our students "to win their spurs" (N.B.—A Veterinary Contingent O.T.C. is a mounted branch), I have consented, through the medium of The Veterinary Journal, to give an outline of the organisation, function, training, value morally and materially to the individual and to the State of the Officers' Training Corps, and, lastly, its application to veterinary service, which must take its place with other branches of the Army in the movement.

#### General Organisation of O.T.C. and Training.

Colonel Earle, in his lecture, gave credit for the successful embarking of the Officers' Training Corps in its present form to a number of junior General Staff officers, and named in particular Major Meiklejohn, V.C., Gordon Highlanders. Based on the Act of 1907, during Lord Haldane's Secretaryship, its actual formation in the following year was the outcome of a committee of school and university teachers under the chairmanship of Sir Edward Ward, then Permanent Under-Secretary for War, the object of the committee being to afford a standardised or definite measure of military training to students such as would fit them for commissions in the Army, Special Reserve of Officers, and of the Territorial Force. The existing Volunteer Corps of schools and universities, which were very popular institutions, and

which still live in the proud memory of past scholars, were absorbed into the Corps as a solid phalanx to admit of substantial expansion. The effect was marvellous. By 1914 and the outbreak of war 164 schools and 23 universities had formed contingents, with 21,566 cadets enrolled at schools (Junior Division) and 6,170 cadets at universities, medical and veterinary colleges (Senior Division). In addition, there were roughly 25,000 ex-cadets classified as "previously trained." It will be agreed that these numbers constituted a very fine reserve in view of the commencement of a war and the necessary expansion of an army on mobilisation, but some idea of the inadequacy of even these numbers in a war of the magnitude through which we have passed will be gained when it is realised that the requirements in army commissions in fighting units alone for the complete year of 1917 amounted to over 40,000.

The number of contingents to-day is approximately the same as in 1914, but it is satisfactory to note that the number of cadets on the rolls has increased, the number in the Junior Division last year, for instance, being over 30,000. It is a movement which certainly has come to stay, and, given the support it deserves from Government, both morally and financially as a business proposition, its inherent merit will ensure its continued success. Moreover it has now the experience of war to add to its perfection and full benefit.

The Corps consists of Senior and Junior Divisions, the former being at universities, medical and veterinary colleges, and the latter at public and other large schools. University staffs and professors of medical and veterinary colleges are officers in the Senior Division in their respective contingents, and masters of schools are similarly officers in the Junior Division. In both cases such officers are borne on the Unattached List of the Territorial Force. Contingents of the Senior Division are provided with adjutants appointed from the Regular Army and attached to the General Staff of the Army. Non-commissioned officer instructors are also supplied. In some instances contingents of the Senior Division have chaplains and quartermasters, both belonging to the Territorial Force. Junior Division contingents have no adjutants, and it is an interesting and perhaps unfortunate point in the Act of 1907, that it is laid down that national funds will not be devoted to the training of boys of less than sixteen years of age in State-aided schools.

In the Senior Division, though infantry training is the staple, there are units of cavalry, artillery, engineers, signals, R.A.S.C., R.A.M.C., and R.A.V.C., and the special duties relating to these branches are taught on the lines of corresponding units in the Army.

In the Junior Division, infantry training alone is given, with the exception of one college and three schools, which have companies or platoons of Royal Engineers.

Equipment, arms and uniform are found by the public in kind or from grants.

Enrolment is voluntary. Cadets serve under a contract with their universities, etc., and they are not subject to military law.

Training is carried out under the supervision of the Chief of the Imperial General Staff by the officers of the various contingents in term time and at annual camps, the adjutants and N.C.O. instructors necessarily taking a large share in this, and in the administration of the large contingents to which they are appointed.

Attendance at a certain number of instructional parades and at annual camps is necessary to qualify for efficiency. At the annual camps the instruction is made as practical as possible.

Two Certificates, termed Certificate "A" and Certificate "B," are obtainable by examination. One year's training is the minimum for the former, and two years for the latter. Only Certificate "A" applies in the Junior Division : both certificates can be obtained in the Senior Division. There are certain concessions attached to these certificates in the event of cadets electing a career in the Regular Army, and, moreover, it is an honour to cadets to secure them.

### Function and Value of O.T.C.

The *raison d'etrê* of Contingents Officers' Training Corps is primarily and essentially the provision of suitable officers trained to military duties, and the creation of a reserve of officers in the event of war. That this function has been satisfactorily demonstrated there is no question. The war proved the success of it to the hilt, and Earl Haig, in his final despatch of the British Expeditionary Force, France, paid a high tribute to the work done by schools and universities through Contingents O.T.C. There are, however, other aspects of this movement which far eclipse the primary object for which it was entertained, and it is to a consideration of these fundamentally important and vital aspects or issues that I particularly desire to devote a few words in this article. Masters of schools and colleges, and the staffs of universities, appreciate the situation at a higher value than the actual output of young men trained in military duty. The movement is an easy aid to that necessary discipline and restraint which must be exerted at times by teachers. It also appeals to the higher instincts of youth. Habits of punctuality, self-respect, self-discipline, consideration for others, chivalry, and *esprit-de-corps* are promoted and fostered. Discipline, when it becomes a habit, forms character. *Esprit-de-corps* in a unit generates loyalty and patriotism in a nation. The confidence

inspired by words of command to each other in training is an asset of great value in intercourse between men in after years. Altogether the movement is one which carries with it high conceptions of citizenship and patriotism, and is a solid pillar of Empire. To my mind there is no more powerful antidote to the poisonous doctrines of anarchy, communism and bloody revolution which are being instilled into the minds of the young at the present time.

Scarcely less important is the benefit which accrues from the open-air drill and manœuvres, acting as a tonic towards mental and physical development. A well-set-up, well-turned-out young man is a credit to himself as well as to his *alma mater*, and likely to be a credit to his country.

### Veterinary Contingents.

There are two Veterinary Contingents O.T.C., viz., the Royal Veterinary College Dublin Contingent and that of the Royal (Dick) Veterinary College, Edinburgh. The former was initiated in the year 1912 by the late Professor A. E. Mettam, Principal of the College, who, as commandant, and with Professors Craig, O'Connor, and Dunne as subaltern officers, took up the movement with great enthusiasm. The number of cadets amounted to, roughly, sixty. General Sir Neville Lyttelton, Commander of the Forces in Ireland, took the first parade of the contingent, and on his leaving the command his successor, General Sir Arthur Paget, showed the same personal interest in it. The Adjutant was Captain (now Major) de Courcey Wheeler, Royal Dublin Fusiliers, who was also adjutant to the Trinity College and Royal College of Surgeons Contingents. The first N.C.O. instructor was Sergt.-Major Warburton, R.A.V.C., an excellent drill instructor, and one of our valued warrant officers during the war. Instructional parades during term times were carried out at the College and at Beggars' Bush Barracks close at hand, and the annual camp was held at the Curragh, an ideal place for it, as mounted work could be combined with duty at the Station Veterinary Hospital, Curragh, where Nos. 7 and 8 Sections A.V.C. were located. In the absence of the Adjutant the contingent, while at camp, was taken in hand by Major Lenox-Conyngham, A.V.C., in both the years 1912 and 1913, and his experience of Army veterinary service and practical guidance made camp duties a success. Horses for demonstration and mounted work in the year 1912 were furnished by the Royal Artillery, Kildare. This was not a satisfactory arrangement, as Kildare was too distant from the camp and Station Veterinary Hospital, time being wasted in bringing and returning the horses. In 1913 a troop of horses from the 4th Hussars was provided through the kind interest shown by General Gough, Commanding the 3rd Cavalry Brigade. The horses were placed in

one of the regimental troop-stables close to the Veterinary Hospital; they were fed, watered and groomed by the cadets, under Major Lenox-Conyngham's guidance, as part of their training, the officer commanding the squadron visiting the stable at the customary stable hour in common with the rest of his squadron, and at the end of the two weeks' training he expressed his pleasure at the manner in which the horses had been cared for and groomed. Needless to say that with two cadets to each horse for grooming, the bloom on the coat was super-excellent. Such a happy circumstance in numbers for stable duties is not usual in the experience of an Army horse. I regret that this contingent, with which I was so much identified during the period of my appointment as A.D.V.S. Irish Command, is at present in abeyance, but it is hoped that ere long it will resume its very important role.

Principal Charnock Bradley's Contingent at the Royal (Dick) Veterinary College, Edinburgh, was formed the year after the Ireland contingent, and was nearly as strong in number of cadets. Major Ainsworth Wilson was the first commanding officer, with Captain Mitchell, who gained the Military Cross during the war, as his principal officer. Sergt.-Major Field, R.A.V.C., another of our well-proved warrant officers during the war, was the N.C.O. instructor. I had the pleasure of being associated with this contingent in 1914, when it came to Aldershot for its annual camp, and I was much impressed with the quality of its work. Capt. (now Brevet Lieut.-Colonel) Mosley, R.A.V.C., was appointed adjutant and superviser of training, and, in spite of difficulties, there was no lack of expedient and resource. The drawback was the inability to obtain a definite allotment of horses for mounted training duties, and the cadets had to rely on the patients in the Station Veterinary Hospital for necessary demonstration and stable management purposes.

In 1913, by arrangement of the D.G.A.V.S. and Sir John McFadyean, Dean of the Royal Veterinary College, London, I addressed the students of that College on the subject of a veterinary contingent, but although Sir John expressed his willingness to become its first commandant, no contingent resulted, for the reason that so many students had already joined the University of London Contingent. However, as there has been a general re-formation of Contingents O.T.C. since the war, it is hoped that the Royal Veterinary College, London, will now elect to have its own, and that it will honour Sir John McFadyean by appointing him as its first commandant. I should be pleased to assist, and I am sure it will not lack support from the many officers who have the experience of all phases of veterinary requirements in war.

TRAINING IN VETERINARY CONTINGENTS.

The course of training is shaped to fit the veterinary student, on his becoming qualified, to undertake the duties of an executive officer of the Royal Army Veterinary Corps in the field with the least loss of time and without the trouble and expense of sending him to a centre for preliminary training. True, he may not be so well versed in military veterinary matters as the junior regular officer, R.A.V.C., who, on joining the Army, is required to undergo a probationary training (including mounted drill) of several months, but in essential matters affecting veterinary service under both peace and war conditions, and in the management of Army animals generally, the cadet during his period in a veterinary contingent will have gained a good grasp of the principles underlying his duties as an officer, and many of the necessary details. With a total of four years' residence at his college he certainly has time to assimilate all the elements which make for a perfect officer. He will know enough of discipline to relieve him from embarrassment on taking his place in the field at his country's call, enough of drill to give him confidence in the command of his men, and enough of the interior economy of units of veterinary service to enable him easily and successfully to put in operation all those measures which are indispensable for the welfare of his men and the animals entrusted to his care, be they patients or on the working establishment of his unit. Also he is rendered *au fait* with all diseases incidental to Army animals, and apart from the benefit derived thereby professionally, when he is called to arms he is under no handicap to know what to do according to Army procedure, a most important factor in the training of a veterinary officer, and particularly, perhaps, when the matter of contagious disease presents itself.

Veterinary contingents are modelled on the organisation appertaining to the Regular Army Veterinary Service; that is to say, in sections, with the various N.C.O. grades, ranks and files, and the arrangement is very convenient. From these sections the necessary field veterinary units can be improvised and practised.

Instruction must partake largely of the practical. Drill and lectures are not the *summum bonum* of training. Facilities for practising what is preached is all-important. Therefore cadets must not only have the advantage of visits to troop stables and the barrack square to witness stable management, the saddling and teaming of horses, the loading of wagons and the many other details relating to their special sphere, but they must perform these duties themselves. And for instruction in field procedure, and for the practice of their own field organisation, mobile veterinary sections, methods of evacuation, entrainment, embarkation, etc., it is essential that the provision of

a certain number of animals and wagons should be made, at least for the period of annual camps. It is quite realised that this presents a difficulty. To hire is costly, and the loan of animals is not altogether appreciated by units, and, moreover, annual camps of contingents being held immediately after the summer session of colleges, viz., at the end of July and the beginning of August, the period of requirement is apt to clash with brigade training of mounted units. However, to meet the difficulty ways and means are possible. In a previous paragraph I indicated a method which proved very satisfactory to both the unit supplying the horses and the contingent under training. Or it might be possible to supply horses from the reserve held by Remount or Veterinary Services under the boarding-out scheme. Contingents training separately at annual camps do not require a large number of horses : camp duties can be split up, half the contingent practising mounted schemes while the other half is engaged in hospital work, and *vice versa*. This was done in the instance cited above, but the whole contingent was present with the horses at stable hour for grooming, saddle cleaning and other stable duties.

Following the rule obtaining in other contingents, Certificates "A" and "B" are granted in veterinary contingents, the former at a minimum of one year's service in the contingent, and the latter at a minimum of two years'. Such, at all events, was the system followed when the contingents were first formed, and it was satisfactory, as the third and final year students were equal to the professional knowledge demanded by Certificate "B," but in view of cadets joining in their first year at college the periods at which certificates should be granted require modification to agree specifically with the college professional courses, unless a higher or "proficiency" certificate for the final year student or graduate can be instituted.

During the first year in the contingent, before the cadet has entered on the advanced subjects of medicine and surgery, and for Certificate "A," the cadet is instructed in the military part of his duties, squad and company drill, map reading, elementary military law, first aid, elementary field work, animal management, and in the organisation of Army Veterinary Service by lecture. He is expected to supplement such instruction by reference to certain text-books and regulations. To become "efficient" he must attend a fixed number of instructional parades and the annual camp.

For Certificate "B" the cadet is instructed in more advanced work, which includes a knowledge of medicine, hygiene, etc., and roughly embraces Army organisation and administration, organisation and function of veterinary units, military law, veterinary hygiene,

diseases, and duties incidental to a junior officer of the Army Veterinary Service in the field. It is made as practical as possible.

As the veterinary contingents were only initiated a little over two years previous to the war, time did not admit of many appointments to commissions in the Special Reserve, and Contingents were really only beginning to feel their feet in the matter of training, but I can safely affirm that the instruction imparted was of great value and a large asset to veterinary service during the war. It was astonishing how quickly our young officers fell into their places in the field, and with the knowledge of procedure gained in the O.T.C. what fine commanding officers they proved. With the experience of the war there ought to be no question as to exact requirements in training, and in consequence it should not only be more interesting to the cadet, but should lead to greater efficiency. There only remains the personal enthusiasm on the part of officers and cadets to make the movement a success. The Army Veterinary Service was imperfectly known to the public previous to 1914, but the Great War gave it the opportunity to show its merit, and it is up to the profession to ensure that the efficiency it gained is continued.

Reverting again to annual camps, it is hoped that some time in the future a system of the nature of brigade training, whereby all veterinary contingents can be practised together, will be followed, or that they will be permitted to participate in Army or Command manœuvres under the direction of one of our senior officers. This would be the very highest of practical training.

### Special Advantages Recommended.

To obviate disinclination of students to join contingents, which may be induced by war weariness, previous active service, or the feeling that officers serving on a temporary commission will receive better pay and have equal or better chances of temporary promotion or preferment over Special Reserve officers, the following special advantages are recommended, if such have not yet been sanctioned :—

(1) Abolition of temporary commissions carrying a higher rate of pay than in S.R. and T.F. All commissions to be either in S.R. or T.F.
(2) Six months' seniority to be granted to officers on joining the S.R. or T.F. if in possession of Certificate "B" and three months if in possession of Certificate "A."
(3) Credit of 6 per cent. of marks to holders of Certificate "B" and 3 per cent. to holders of Certificate "A" at entrance examinations for the R.A.V.C.
(4) Preference in matters of posting or temporary promotion to officers in possession of O.T.C. Certificates.
(5) Reduction of probationary training in R.A.V.C.

## Clinical.

### SOME CLINICAL CASES.

By G. C. LANCASTER, F.R.C.V.S.,
*Burnley.*

I.—Sinuous Wounds of the Withers and Poll,

During the last three months I have had five cases of fistulous withers in old Army horses which were purchased from the Ormskirk depot. Of these five, four were in the hands of farmers and one a wholesale fruiterer, so their work has not been hard. One of these (the fruiterer's horse) developed very suddenly two large swellings in the neck immediately in front of the collar, and upon operating a hole 1 inch in diameter was found, which ran through the *lig. nuchae.*

One of the others (a farmer's horse) had poll evil as well, and when operating a small piece of bone was removed. All these animals have been working for about eighteen months to two years. I should very much like to ask if other practitioners are experiencing the same.

II.—Stuttgart Disease.

During the summer I had a very serious outbreak of Stuttgart disease here in Burnley amongst the dogs and cats, but am pleased to say it is now gradually dying out, like most of the canine world has done in this neighbourhood.

For treatment I have tried everything in reason, and find that the best is Parke, Davis & Co.'s mixed canine serum, but only if given in the early stages, and bismuth and pepsin, or bismuth, sodi bicarb., and salol, but in all cases medicinal paraffin is used frequently. In some cases I used the treatment advised by G. Mayall, of Bolton (for toxic enteritis and constipation), which comprises holding the dog up by the hind legs and allowing tepid saline solution to run into the bowels until vomition commences. This method I tried on three dogs, and in the early stages—as soon as they were received by me—but they all died the same evening. Still, I hope to try it again, when I trust I shall be more successful.

III.—Colic.

The other day I had a very severe case of colic here, in which I was anticipating a ruptured stomach, but I am pleased to say the horse recovered. Upon arriving at the stables I found a vanner on the floor, very rough and covered with perspiration; tympanitis was also commencing. In the manger there was about 4 gallons of bran and oats—the horse's tea—and on rectal examination the fæces solely comprised bran and oats, so I asked what they fed the horse on, and to my surprise they said the animal had had neither chop nor hay for nearly three weeks. This firm only keep one horse, and they buy the hay by the load, and although they had some on order it had not

arrived. In speaking to the carter afterwards, he informed me that their last load of hay was very poor in quality. The horse would not eat it in consequence. He had used it for bedding, and the animal for over six months had not eaten 14 lbs. of hay a week.

The animal was not fat—in nice order, that is all—and was not worked hard either, so it shows us that bran and oat feeding without hay will not fatten a horse.

### IV.—Choking.

I was called out to see a coal dealer's horse one evening, and upon examination I found it was a case of choking. The animal held its head down and saliva was running most profusely from the mouth and nose. Temperature normal and pulse good. This animal was out at grass and had only been accidentally seen out of sorts when another horse was being taken to the field, consequently there is no history as to what was causing the obstruction The horse only being small, I found that my rather old-fashioned probang was too large, so linseed oil was resorted to. The stoppage must evidently have been somewhere in the lower one-third of the œsophagus, because it could not be felt externally, and also the animal could take about a gill of oil before it returned, as it did by the nostrils. Coughing and salivation would then profusely commence, but soon pass over. After the animal had recovered more oil was gently administered, with the same effect, but after a little perseverance the obstruction was removed and the animal soon better.

### V.—Everted Rectum.

One Saturday afternoon I was asked to go and see a pony with an everted rectum. Upon arriving I found a very old pony mare of such a kicking nature that a stranger dare not approach it unless it had a twitch on. Being too small for hobbles it was cast with the side lines, after which the rectum was returned, although it had been out three or four days. Having no chloroform with me there was considerable straining, with the result that the rectum was slightly punctured. Nevertheless, with very little after treatment—pouring on an oily wound lotion—it made a fine recovery. The rectum was sutured with tape, which was removed about the following week.

### VI.—Ruptured Muscle.

This week I was asked to go and see a heifer with a dislocated shoulder. Upon examination I found a newly-calved Irish heifer, which had come from Ireland the previous day. The shoulder joint was not dislocated, but the Rhomboideus muscles must have been severely ruptured, because when the animal walked the scapula projected above the spines of the thoracic vertebræ, and it rocked

about at each step. I have advised the " wait and see " policy, and if anything happens I will report further on the subject.

This is the first case I have met of this sort. At certain times, when the animal is standing still, the abnormality is very little, but when made to move the superior border of the scapula is very prominent over the withers, and except for the skin and subcutaneous tissue there is very little keeping the bone in the cow. The gait is surprisingly good, and there is no pain, but a little swelling on the upper half of the scapula.

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## TETANUS IN A MARE.

By " OBSERVANDA."

*Patient.*—Van mare, age 6 years, height 15.2.

*History.*—On August 11 this year, about 8 p.m., I was telephoned the following message : " Please come and see mare, whose foal you docked this morning. She is unable to stand, and is ' jaw-locked.' " When I saw the mare in the morning she was apparently in good health, was taken out of the loose-box during the operation, and returned when the operation was completed, turned out in the field at once with the foal looking quite healthy and full of bloom and condition.

On making enquiries I found they had great difficulty in getting the mare from the field to the loose-box, and the only notification of the mare's illness in the field by the owner was the fact of her standing in one place and not grazing as usual. Immediately she was in the loose-box she fell, and the owner made her as comfortable as circumstances would permit with sacks of straw and bales of straw, endeavouring as much as possible to keep her in the recumbent sternal position. The foal was taken away from the mare and hand-fed until the mare's milk supply gradually returned.

Examination revealed the following conditions :—Pulse 70, temperature 103·3, respirations 80, perspiring freely, occasional paroxysms of pain, and attempts to rise, which became more feeble. At times the mare groaned as if in great pain. On attempting to open the mare's mouth I realised why the owner had decided this was a case of " lock-jaw "—the muscles of the neck and hindquarters were in a state of tonic spasm, and the characteristic eye symptom was very pronounced.

*Treatment.*—It was useless making any attempt to find a wound owing to the mare's position, but hypodermically injected a full dose of tetanus antitoxin, and left powders containing two-ounce doses of mag. sulph. to be offered in cold water during the night, also asking

for careful observation of the colour of the urine if micturition occurred. The owner followed me, and I supplied him with a set of slings and advised him to place her in them if possible before my arrival the following morning, feeling confident if this was not adopted serious bed sores would be the result.

*August* 12.—The mare had been placed in slings on my arrival, after much difficulty, but was very unsettled and uneasy. During the day she became more reconciled. She had drunk the mag. sulph. in water during the night, and this was continued, and another injection of tetanus antitoxin administered. There was no change in the tetanic symptoms.

*August* 13.—The improvement this morning was very noticeable, all the aggravating symptoms were subsiding, and to my surprise the mare was eating " green clover " without the slightest difficulty; the membrana nictitans was quite normal, and also the natural secretions. The subsequent treatment is uninteresting; antitoxin was discontinued, and the bed sores which I anticipated yielded to cleanliness and treatment. My opinions on this case are difficult to explain after reading records of similar cases and personally coming in contact with one, and closely observing, I am inclined to the opinion the disease resembles and presents symptoms similar to parturient eclampsia and hæmoglobinuria, but the prominent symptoms of tetanus are present.

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## ACCIDENT TO A SHIRE MARE.

By " OBSERVANDA."

*Patient.*—Shire mare, height 16·3, age 7 years.

*History.*—One Saturday evening, about the end of August, 1920, I was requested to see a mare at a farm about four miles from my surgery. The only information I could gain was that the mare had " staked herself." On arriving at the farm I ascertained from the owner the following details :—The mare was leading in a load of corn to the stack yard; on a level with the mare's tail a hay fork or pikel was pushed into the load of corn, the prongs being inserted into the load, the shaft of the pikel protruding. In turning a corner (so I am informed) the shaft of the pikel, through pressure in the act of turning, ruptured the skin on the left side of the perinæum and passed in a straight line parallel to the direction of the vagina and rectum. The mare commenced kicking violently, the shaft of the pikel broke and became embedded in the flesh. The patient was naturally vicious and difficult to handle. An attempt was made to examine the injury, but owing to her kicking and being unmanageable, and darkness approaching, I decided to postpone any further interference with the patient until the following morning.

On Sunday morning I found the patient a little easier to handle, and showing very little signs of systemic disturbance or discomfort.

The mare was cast with " hobbles " on a good bed of straw, on the off side. After washing the wound antiseptically I inserted my hand into the canal made by the pikel, and readily found the jagged end of the pikel shaft, but could not secure a sufficient hold to loosen or remove it. The external wound was then slightly enlarged, which assisted us, and my son, who had a smaller hand, managed by gentle up and down movements to gradually loosen the obstacle and remove it. The end of the shaft where it had been broken was very " jagged," and the piece removed measured 12½ inches.

Before removing the hobbles I examined the rectum and the vagina, but found them normal and uninjured. Owing to the viciousness of the patient the after treatment was not as carefully attended to as I would have wished, and simply consisted of washing the external wound with an antiseptic solution applied with a syringe. The recovery was uneventful. There was very little discharge from the cavity of the wound, and the effusion of the near hind leg was very slight. The absence of bacterial contamination was due, in my opinion, to the cleanliness of the pikel shaft, due probably to its constant use.

The mare foaled this spring a normal foal.

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## HÆMORRHAGIC SEPTICÆMIA IN CATTLE.

By L. C. MAGUIRE, M.R.C.V.S.
(*Fairford, Gloucestershire*).

In the Veterinary Journal for July last there was an article by Mr. W. F. Aston, M.R.C.V.S., Ludlow, describing a disease which occurred in his practice and which the author was unable to diagnose. Having since then seen an outbreak of hæmorrhagic septicæmia in the above gentleman's practice, I have no hesitation in saying that the disease described by him was that of hæmorrhagic septicæmia in sub-acute form.

Some few years ago I recorded the presence of two outbreaks of this disease, at the same time affirming that many cases of death among cattle, described as due to bracken poisoning, are in reality due to this disease. Since then I have become more convinced of this fact. In the outbreak which occurred in Mr. Aston's practice last August, and which I personally investigated, five animals died before preventive measures could be applied.

The disease occurs most commonly in the acute form, sometimes in the sub-acute and rarely the chronic form. The causative factor is a bacillus—a variety of the Bacillus Bipolar Septicus, known as

the Bacillus Bovisepticus. In the acute form the disease manifests itself as in acute septicæmia, the animal dying in from 18 to 24 hours. Clinically the most notable symptoms are great depression, very high temperature, often up to 108°, bloody discharge from nostrils, petechial hæmorrhages beneath mucous membrane of nostrils; dysentery is very often present. In the sub-acute form œdematous swellings of head and breast are often present ; in the latter the disease runs a much longer course and some of the infected animals recover. The post-mortem findings are those of acute or sub-acute septicæmia, together with gastro-enteritis.

*Treatment.*—In the acute form of the disease treatment of any kind seems to be hopeless. In the other forms treatment with immune serum appears to give good results. As the causative organisms belong to a group to which strict specificity to variety in relation to antibodies does not apply, immune serum can be employed with very beneficial results. In six outbreaks which I have up to the present encountered the preventive measures which I have in each case adopted were the drenching of all the in-contact animals with potassium permanagate. The dose for each animal is two drachms in half a gallon of water, this to be given each day for four consecutive days. Up to the present I have not seen infection occur in any of the in-contact animals treated in this manner, although on one farm I have seen over 100 in-contacts thus treated, five having died before the treatment was adopted.

Theoretically, in an outbreak of the disease, the rational preventive treatment to adopt would be the use of immune serum on all the animals exposed to infection, but as this method would prove extremely expensive where a number of animals were to be treated, as an alternative, I consider potassium permanganate a very useful agent. In districts where the disease is known to exist, I strongly advocate vaccination of all animals irrespective of their age. The best method of vaccination is the serum simultaneous, where immune serum and a vaccine are employed at the same time. Vaccination by this method confers an immunity which lasts for about one year, therefore yearly vaccinations should be carried out. Up to quite lately, neither serum nor vaccine were obtainable in this country, but I now observe that at least one firm stocks these biologics ; I refer to Messrs. Parke, Davis & Co. Practitioners should advise their clients as to the means of prevention of this disease, by the annual vaccination of their cattle. It would not only be a source of increased income to themselves, but a means whereby the lives of numerous valuable animals can be saved yearly.

## ŒSTRUM IN A POMERANIAN BITCH SUCCESSFULLY INDUCED BY THE INTERNAL ADMINISTRATION OF DESICCATED ORCHIC SUBSTANCE.

By J. F. D. TUTT, M.R.C.V.S., F.L.S., F.Z.S.,
*Winchester.*

A CLIENT recently consulted me respecting a valuable Pomeranian bitch that had missed her last two periods of œstrum, and was several weeks overdue for the present one. I tried at first, unsuccessfully, tablets of Extract of Corpus Luteum, and Messrs. Parke, Davis & Co. then kindly offered me a sample of their tablets of orchic substance to try, and after four had been given (one daily) the result desired was obtained.

I am informed that these tablets have not been tried before on a dog, and I therefore record this one instance as it may be of interest.

In a leaflet sent with the tablets it is stated that each tablet represents 5 grains of carefully desiccated orchic substance (also known as orchitic or testicular substance), equivalent to 60 grains of the fresh gland.

Harrower (" Practical Hormone Therapy," 1914, p. 338) is quoted as follows :—" The administration of orchic substance not only provides a supply of testicular hormone in cases of deficient secretion, but it stimulates the organ and tends to bring about normal function at the same time that it exerts a tonic influence on the whole glandular system, particularly upon those organs which are concerned in the production of energy. It enhances the hormone content of the blood."

The leaflet gives it as being therapeutically indicated in diabetes, prostatic hypertrophy, impotence, and also that it has been reported as being beneficial in eczema, psoriasis and certain forms of obesity.

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## A CASE OF HODGKINS' DISEASE.

By GEORGE SIMONS, M.R.C.V.S.,
*Lancaster.*

*Subject.*—Aberdeen terrier, 14 years old.

*History.*—Except for one or two mild attacks of indigestion, had always enjoyed good health. Six months previous to last illness was noted to be in failing health generally, became very stiff in its movements, and unable to take usual exercise. At this time the animal was very fat in condition, and by treatment of the symptoms and careful dieting great improvement ensued. In fact, so much so that for the following four months the patient seemed to have entered upon a new lease of life. Then commenced the last illness.

*Symptoms.*—Periodic attacks of sickness, accompanied by a loose condition of the bowels, which, in the course of a few days, became rapidly worse, until diarrhœa was more or less continuous. Treatment

with gastric sedatives and intestinal antiseptics somewhat improved the condition for a time. At this period it was noticed that the submaxillary lymphatic glands were slightly enlarged and the abdomen more pendulous than previous; then the remaining superficial lymphatic glands became enlarged in pairs. The patient still maintained a good appetite, but gradually became weaker and unable, although willing, to take exercise, the least exertion causing the respiration to become very hurried. Gradually the glands became much larger, the abdomen very pendulous, the diarrhœa quite beyond control, and as the patient became very uneasy and distressed it was destroyed with morphia and chloroform.

*Treatment,* both medicinal and dietetic ways directed to the alleviation of the symptoms and maintenance of strength.

It is regretted that a post-mortem examination was not permitted by the owner.

*Remarks.*—Although under periodic observation for six months no enlargement of the glands became noticeable until the last four or five weeks.

Contrary to what is believed to be the rule in both Hodgkins' disease and in Leukemia, the appetite remained excellent throughout, whilst there was no abnormal thirst.

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## CAT FLEA (*CHENOCEPHALUS FELIS*) LARVÆ IN LARGE NUMBERS UPON THE HOST.

By A. W. NOEL PILLERS, F.R.C.V.S.,
*Liverpool.*

On August 13 last year I received from Mr. R. A. Edwards, M.R.C.V.S., who is with Mr. Elmer Ebbetts, of Rochester, a large number of flea eggs and larvæ, which he stated were being shed by a cat wherever it rested. The animal itself was never seen, and the owner only once; apart from scratching, very little clinical data were obtainable. The material received by me was sufficient to completely cover the whole surface of a 2¼-inch petri dish, and if such a quantiyt could be collected by the owner for dispatch the coat must indeed have contained vast numbers. On one occasion the late E. Wallis Hoare sent me about 100 cat-flea eggs, which he stated, in his semi-serious style, "were continuously dropping from the cat's coat on to the oilcloth, and thereby causing great annoyance to the members of the household." An odd larva is not an uncommon find in scrapings or scabs from the cat's head. I have encountered them several times in this way, but the finding of so great a quantity upon the host is new to me.

The pearly white eggs, which are about ·5 mm. long, readily drop off the bearer after being laid. In two to four days they hatch into

larvæ, and being very sensitive to light seek out hiding places in cracks, rubbish, beddings, etc. The larvæ period is about seven to thirty days' duration. A white cacoon is then spun, and inside of this the pupa forms. The adult appears in from five to ten days. From egg to adult therefore occupies on an average about twenty-eight days. Fig. 1 gives a good general outline of a larva. I am indebted to Miss

Larva of the Cat Flea (*Chenocephalus Felis.*)

A. M. Evans, M.Sc., for kindly raising some of the larvæ to adults, when they were found to be *C. felis.*

I have recently received some flea larvæ from the skin of a Persian cat from Mr. E. H. Stent, M.R.C.V.S., of Manchester, and I therefore thought the above few notes would be of interest to members of the profession.

## A CASE OF TUBERCULOSIS IN THE GOAT.

By GEORGE SIMONS, M.R.C.V.S.,
*Lancaster.*

*Subject.*—Pure bred white Anglo-Nubian nanny-goat, 3 years old.

*History.*—Been in owner's hands for six months previous to any symptoms of illness, and had always enjoyed good health.

*Symptoms.*—Two or three weeks after a normal parturition the animal commenced to refuse the usual concentrated food, although taking gruel and grazing fairly keenly. The temperature and pulse remained normal, mucous membranes pale and the eyes dull, the general appearance being one of debility and anæmia. There was no cough nor any enlargement of the superficial lymphatics. On auscultation the lungs appeared normal.

*Diagnosis.*—At this stage a diagnosis of debility following parturition was given, and the usual treatment for such a condition prescribed. The condition gradually became worse ; diarrhœa set in, which in a few days became very profuse. The abdomen became somewhat pendulous, and in the right side a peculiar lumpy condition (which raised suspicion of tuberculosis) was faintly discernible amongst the bowels. The animal became rapidly worse and was destroyed.

Post-mortem examination revealed enlargement and softening of the mesenteric lymphatics, many of which were filled with thick, creamy pus. None of them were caseated or gritty. The lungs appeared to be perfectly normal. The bowel wall was somewhat thickened, the mucous membrane being very congested. No other microscopical lesions were found anywhere, the remaining lymphatic glands appearing quite normal. The affected glands were forwarded to Sir J. McFadyean, who kindly examined them and pronounced them tubercular.

*Remarks.*—As this animal was bred and reared among one of the foremost goat herds in the country it raises the question as to whether goats are as free from tuberculosis as their enthusiasts would have us believe.

It may be added that, although the goat in question had been in the present owner's herd for six months, none of the members of this herd reacted to the tuberculin test.

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## HYDROCEPHALUS IN A LAMB.

By Major HERBERT MASON, M.B.E., M.R.C.V.S.,
*Director, School of Veterinary Medicine, Cairo.*

A FEMALE lamb 4 months' old, was brought for treatment to the Infirmary of the School of Veterinary Medicine, Cairo.

It showed a large swelling on the back part of the head about the size of a coconut.

The swelling fluctuated on pressure and evidently held liquid contents. It was rather pendulous and rested on the upper part of the cervical region (sketch attached). On pressure no brain symptoms were produced.

On manipulation a bony process about 5 cm. in length was found projecting from the centre of the occipital bone.

It was decided to operate on the case.

An incision was made in the posterior part of the swelling low down and about 300 cc. of clear fluid were collected.

The bony process which had been observed projecting from the occipital bone was presumably a distorted supra-occipital bone. It was removed and a small opening ½ cm. in diameter was found passing through the occipital bone.

The dura mater was ruptured and the parietal layer of the arachnoid membrane was projecting through the orifice and, with the skin, formed the wall of the swelling. The dura mater and the skin were sutured separately.

After the operation the lamb showed symptoms of faintness and collapse.

These symptoms soon passed away and the case made an uninterrupted recovery.

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## PARASITIC NASAL CATARRH CAUSED BY ŒSTRUS OVIS OR GADFLY OF SHEEP.

By E. MORGAN, M.R.C.V.S., D.V.H.,
*Puerto Cabello, Venezuela.*

A PROPHECY from a foreign country might benefit some of the readers of THE VETERINARY JOURNAL in our native land in the spring months of the coming year.

Having read in the papers that the last summer has been one of the severest ones known for many years for animals, on account of the long-continued drought and heat, reminds me of another summer about twenty years ago, more or less, when I was a shepherd on the hills of Cardiganshire, wondering why the fleeting little gadfly caused the flock to scatter in all directions in their attempts to protect their heads so as to evade its attacks whilst depositing eggs or larvæ in their nostrils, the embryos of which, later on, found their way to the sinuses and caused deaths in the spring of the following year of thousands of sheep in that district alone, the majority being heavy-in-lamb ewes.

The first serious symptoms appeared early in March by sneezing, stamping of the feet, and holding the head high. The in-lamb ewes would sooner or later seek a quiet corner of a field and lambing pains would appear. The first remarkable case which I witnessed in the

month of March was a ewe which manifested labour pains all the morning. Eventually, thinking that it was simply a case of difficult parturition, I decided to explore carefully for the lamb and found nothing but a sealed up uterus forced backwards in the passage, and the ewe naturally in great distress, with intermittent fits of coughing. I left the ewe alone very soon and called a long-experienced shepherd to see the animal, who stated that he had never before witnessed a similar case. Later in the day the premature lamb was born dead; the ewe also died an hour afterwards. This was only the commencement of troubles of the kind, which afterwards occurred daily, causing the deaths within a month's time of about a hundred of our ewes. Seeing that the majority of the sheep of all ages were sneezing and discharging at the nostrils, I made as careful a post-mortem examination as a shepherd could have done on the head of one of the sheep, and found large-sized larvæ. I consulted a veterinary surgeon, who advised me to forward him the head of a sheep, so I sent him two, which he sent on to the London Veterinary School, and Sir John McFadyean kindly examined and advised him, which advice was the cause, undoubtedly, of saving a great number of sheep in the district. A rather important point regarding this disease, and which was a mystery to us at the time, inasmuch as the outbreak occurred at our farm only until about two months afterwards, when the flocks of the neighbouring farmers began to sneeze and many of them also died, but now the grass was more plentiful and they had already lambed, so the percentage of deaths was small in comparison to ours. To me the reason of this difference of about two months is obvious. Our flock grazed throughout the year in the lowland, which is a wooded valley where the temperature is much higher than in the high mountains, where the neighbours dispatched their sheep every year to graze from the end of April until October. So the *œstrus ovis* appears, I think, earlier in the lowlands than on the mountain peaks several miles higher up.

Barren ewes, as well as male sheep, suffered, but they resisted far better than heavy-in-lamb sheep the creeping movements of the larvæ in the sinuses of the head and even sometimes in the brain. These larvæ, when they attain mature size, are as restless as maggots, and are seeking a way to escape so as to complete their life cycle just below the surface of the ground. During these movements is the dangerous period, when they cause intense irritation and pain to the sheep, when sneezing, stamping of the feet as if to drive away some visible object takes place, as well as holding the head high. At first there is a slight watery discharge from the nostrils, which later grows thicker and mucopurulent in consistency, and adheres in circles outside

around the nostrils. When the flock is disturbed one hears nothing else but sneezing, and, if confined to a pen, one often finds larvæ which have been expelled from the nostrils here and there.

The gadfly (*œstrus ovis*) is said to have never been seen to eat. (I refer to the fly itself and not the larva, because the latter adheres to the sinuses and grows fat.) Valisnery repeatedly offered them sugar and syrup, but could not induce them to touch them, although he kept one of them for more than two months. It seems to be like the male tick, merely living for one purpose, *i.e.*, of propagating its species. The male soon dies after it has impregnated two or three females, but the female lingers until she has deposited her ova or larvæ, when she expires.

It is difficult to detect these insects whilst on the wing, as their movements are so rapid. They can, however, be seen sometimes half dormant around sheep pens. It belongs to the Diptera order, and is a little larger than the house-fly. The back is brown and the under-surface is dark brown, with yellowish spots at the centre of each abdominal segment. The wings are transparent, and when fully grown exceed half an inch in length, and nearly a quarter of an inch wide. The larva is cone-shaped and about three-quarters of an inch in length, and is composed of eleven rings. It is larger than the horse-bot, but smaller than the ox warble (*hypoderma bovis*). When it escapes from the nostrils of the sheep it bores into the ground; the length of time it remains there before it appears as a fly depends on the weather conditions, but anything from five weeks to two months. The period is short in comparison to the period they pass in the sinuses of the sheep, which apparently is from summer to the spring of the year.

*Prevention.*—It is difficult on an extensive sheep ranch to protect the flocks from the attacks of this fly. Smearing around the nostrils with tar oil can be tried as a prevention. Also salt lick can be placed in troughs covered by a board in which holes have been drilled; around the holes tar is thickly smeared so that the sheep's nostrils get in contact with the tar each time they get at the salt.

It is a custom in some districts where sheep are confined to fields in summer, where there is absence of shelter, to plough deep furrows here and there so that the sheep can place their nostrils for protection, and at the same time during dry weather the dust at such places adheres around their nostrils, which also protects them from the fly. It is most essential to arrange shelter for sheep during the summer, not only to protect them from the gadfly, but also other flies, as well as the sun's rays during the heat of the day.

*Treatment.*—The one which we used with a certain amount of success, although rather a severe one for the sheep for a time after

its administration, was a few drops of turpentine in oil poured into each nostril, which was followed certainly by the expulsion of larvæ, which could be seen on the floor of the sheep pen.

Where valuable sheep are kept a surgical operation can be carried out when the life of the animal is in danger. It consists of trephining the sinuses and extracting the larvæ by means of a forceps.

A simpler method than opening the sinuses by means of a trephine is to use a trocar and canula, something similar to the one for operating on Sturdy or Gid, by means of which watery solutions of benzene, etc., can be injected into the sinuses to destroy the larvæ, as the fatal injury is caused, most often, during their exit from the sinuses.

A good pasture is essential, and where sheep are accustomed to eating dry food, such as corn or cake, it pays the owner well to allow the sheep a fair amount, otherwise the ewes will lack the strength to resist abnormal conditions until the larvæ are expelled.

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## THE EFFECT OF CASTRATION IN THE FOWL.

By F. A. E. CREW, M.D., D.Sc.
(*Papers from the Animal Breeding Research Department, University of Edinburgh*).

For purposes of description the sex equipment of the domestic fowl may be divided into two groups : (1) *The primary sexual characters* connected directly with the function of reproduction, *i.e.* (*a*) the sex glands or gonads, the single ovary of the hen and the paired testes of the cock ; (*b*) the accessory sexual apparatus of ducts which convey the mature reproductive cells from the gonads, the unpaired oviduct of the hen, the paired *vasa deferentia* of the cock. (2) *The secondary sexual characters*, those anatomical features which are peculiar to one sex only—are sex limited, that is, and which include such differences between the sexes as those in size, shape and carriage of the body, in size and form of head furnishings and spurs, in the structure of feathers regionally. In some varieties there exists an obvious difference in the pattern of the colouration of the feathers and of the general plumage. In the main these secondary sexual characters would appear to be connected only indirectly with the function of reproduction, being decorative in the general effect and playing their part in concealment, courtship and combat.

But while in most varieties the dorsal plumage of the male differs from that of the female in length of certain feathers, in structural feathers, and, in many cases, in colour also, in certain other breeds, such as the Sebright bantam, the cock is feathered exactly like the hen—he is henny-feathered. In the Campine and the Hamburg there are to be found cocky-feathered and henny-feathered cocks, and in all breeds a henny-feathered cock is occasionally seen. In the old cock-pit days such a bird was held in high esteem, since his antago-

around the nostrils. When the flock is disturbed one hears nothing else but sneezing, and, if confined to a pen, one often finds larvæ which have been expelled from the nostrils here and there.

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nist was inclined to judge by appearance and thus was taken off his guard.

But though as regards plumage pattern the henny-feathered cock is like the hen of the same variety, yet in all other aspects he is a typical male; there are, however, reasons for believing that the henny-feathered cock is less fertile than the cocks-feathered.

The sexes are further to be distinguished by differences in temperament and behaviour. The cock is known by his characteristic vocal reports in crowing, by his impulsive sexual instinct, and by his bellicose disposition. He is an ardent fighter with other males, a masterful but gallant courtier of many hens, but a parent devoid of all interest in his offspring. The hen, on the other hand, is concerned with the acquisition of food, the laying of eggs, and the mothering of her chicks. She will fight, and fiercely too, with a strange hen, and will bait an

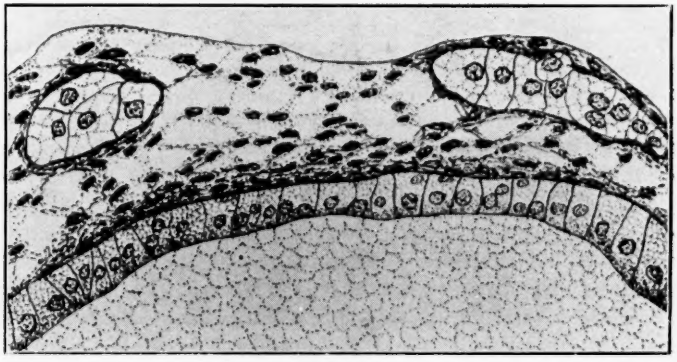


FIG. 1.—Two groups of Luteal Cells in the *theca* of a follicle in the ovary.

ailing cock. She sings and cackles and responds to the advances of the cock.

But exceptionally a bird of one sex is seen to behave as one of the opposite. A perfectly equipped and laying hen crows vigorously and will tread other hens. A cock has been known to brood chickens, and this in the entire absence of any morphological abnormalities. It would seem that the actions of the fowl are of the nature of responses to the stimuli afforded by the presence of other birds. A hen, on the approach of the male, will squat, and the cock then performs what obviously has been an unmeditated act.

The ovary of the hen is built up of a mass of loosely connected oocytes and ova in various stages of maturity. Each ovum is surrounded by the *membrana granulosa* of epithelial "nurse-cells," and also by a theca of spindle-shaped cells formed by a condensation of

the general connective tissue stroma of the ovary. It has been demonstrated that amid the cells of the theca there are groups of large cells filled with a granular material which collect therein following the extrusion of the ripe ovum and produce a yellow pigment which in its chemical reaction is similar to the luteal pigment of the *corpus luteum* of the mammals. For this reason these cells are known as the luteal cells.

Each testis of the cock is built up of a series of tortuous seminiferous tubules lined with the cells from which are derived the spermatozoa. But separating the tubules there is a small amount of intertubular connective tissue; cells which are identical with the luteal cells of the ovary may or may not be present.

The luteal cells are present in considerable numbers in the testes of all young chickens, but are entirely absent from, or present only in

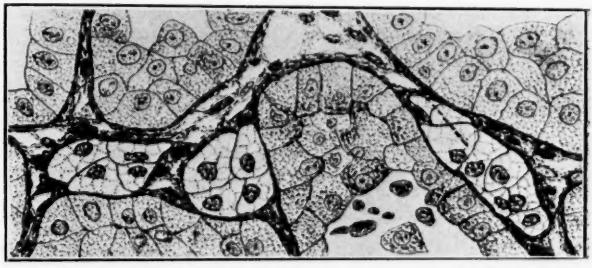


FIG. 2.—Three groups of Luteal Cells in the intertubular connective tissue of the testis of a Sebright (henny-feathered) cock. (After Boring and Morgan.)

small numbers, in the testes of a male over six months old. But in the case of the adult henny-feathered cock these cells are persistent.

Castration of the cocky-feathered cock implies the removal of the seminal tubules with their lining cells and of the intertubular connective tissue. Castration of the henny-feathered cock implies the removal of the seminal tubules, intertubular connective tissue, and of the luteal cells. Ovariotomy implies the removal of the oocytes and ova, the stroma, and of the luteal cells.

Castration of the male before puberty—at the age of two to three months—results in a markedly poor development of the comb, wattles and ear appendages, these organs remaining small, pallid and almost bloodless. The sex instinct is not exhibited, and the capon is gentle, slow, quiet, peaceful and reserved. It does not interfere with hens and is not molested by cocks. It sometimes exhibits the brooding habit. But its plumage and spurs are those of the normal male of the

same breed; they are not affected by the operation save that the plumage is rather fuller and the feathers rather longer as a consequence.

Castration after puberty is immediately followed by suppression of the sex instinct, and the comb, wattles and ear appendages in the course of a few weeks lose all their pronounced vascularity, becoming bloodless and steadily diminishing in size. The plumage is not affected and the spurs continue to grow at the normal rate of 2 mm. per month. Moulting does not modify the type of plumage.

After pre-pubertial castration the accessory reproductory apparatus remains infantile; after post-pubertial castration it becomes infantile.

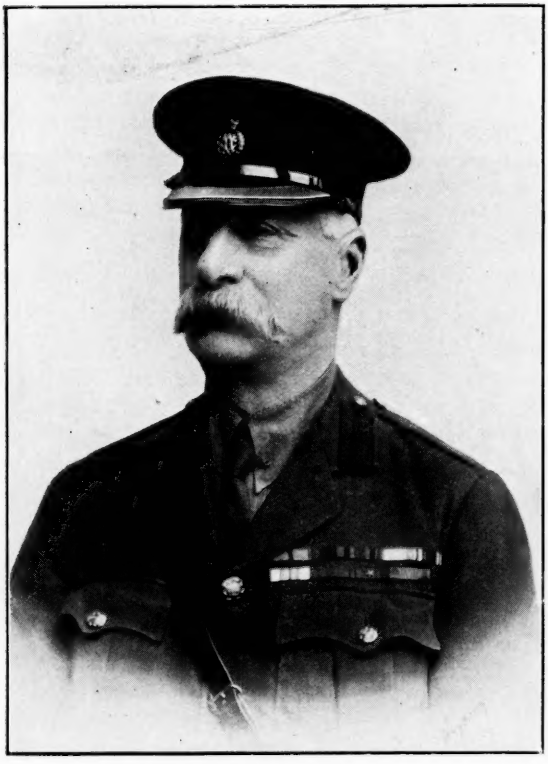
The capon can and does crow and can and does mate with hens, but its disposition is not active. He does not seek the hen, but if on his approach she squats and holds out her wings he will perform the sexual act, responding to her solicitation. The sight of the hen in such cases seems to start a complex reflex. But the challenging crow and the eager impulsive service are associated with the presence of a testis. A capon will fight with a cock, but never violently and never for long.

In the case of henny-feathered cocks of the Campine, Hamburg and Sebright breeds castration is followed by the assumption of the ordinary cock-type of feathering, all new feathers being of this type.

Removal of the ovary of the hen is followed by most profound changes. In most cases the individual becomes an almost complete replica of the male, in others the imitation is not so perfect. The plumage changes are extensive, and feathers growing at the time of the operation alter their character and become male in length, size, colour, form and shape of tip. The comb, wattles and ear appendages gradually become more and more male-like, but the legs remain short and comparatively slender, so that, though the spurs grow so as to resemble those of the male, the bird appears shorter and smaller than a cock of the same breed. With each moult the general appearance becomes more male-like, but the behaviour of the poullard is rather negative. It does not sing, cackle or crow; it does not visit the nest, it is not bellicose and it does not pay attention to hens.

The oviduct of the castrated hen becomes infantile in its proportion.

It is seen that the presence of the testis is necessary for the development and maintenance of the typical head furnishings and for the functional development of the male accessory sexual apparatus. It controls and co-ordinates the activities of the various parts of the reproductive system. In the case of henny-feathered cocks the results of castration show that, in addition to the above actions, the testis is essential for the development and maintenance of this character.



THE LATE LT.-COLONEL ARTHUR MASON, O.B.E., T.D., F.R.C.V.S.
*(Formerly President of the Royal College of Veterinary Surgeons.)*

## THE LATE LIEUT.-COLONEL A. W. MASON, O.B.E., T.D., F.R.C.V.S.

By the death of Colonel Mason, the Council of the Royal College of Veterinary Surgeons loses one of its oldest members, and one whose energies were always directed on the lines of progress and common-sense. A graduate of the London College in 1877, Mr. Mason joined the Army Veterinary Corps, and during his Army career saw a considerable amount of active service. Resigning this for private practice, he settled down in Leeds, where he soon established a name, continuing to take great interest in Army matters in the Territorials. Called up at the commencement of the recent great European War, he went to France and Flanders as A.D.V.S. of a Territorial Division, and for many months was stationed in the Ypres salient. For his services he was twice mentioned in Despatches, and received the Decoration of the O.B.E.

Elected a member of Council in 1891, his service has been continuous until the present time, and in 1898 he was elected to the office of President. Always ready to further the progress of the profession, Col. Mason never spared himself when occasion needed, and by his loss the Council and the profession have lost one of the best and most earnest workers.

# Translations.

## TUBERCULOSIS.

### The German Tuberculosis Congress at Bad Elster.

The reports to hand of the German Tuberculosis Congress, held on May 19 to 21 inclusive at Elster, show that it was well attended, German and foreign visitors numbering about 700. The chief fault found with this congress was the omnipresence of the multiple tautologist. For lack of adequate rationing of these congress pests, several delegates with messages to give were crowded out and received no hearing. Congress logorrhœa is a cosmopolitan evil which bids fair to smother medical meetings and to keep away speakers with something new and interesting to say. This state of affairs is the more deplorable as there are certain remedies open to the organisers of congresses animated by the ambition to suppress the congress bore.

In his opening address Kirchner, of Berlin, discussed the influence of the war on tuberculosis, showing how it affected different areas and different age-groups. In an interesting lecture on the part played by domestic animals in the spread of tuberculosis, Prof. Lydia Rabinowitsch referred to studies she had carried out on dogs and cats. Of nineteen strains of tubercle bacilli cultivated from dogs, as many as sixteen had been found to belong to the human type ; only one belonged to the bovine type, and the two remaining strains were of a transitional type. Of five strains of tubercle bacilli cultivated from cats, three belonged to the human and two to the bovine type. Prof. Rabinowitsch was inclined to regard domestic animals as a fairly important source of infection of tuberculosis to man. Papers by Wassermann and Neufeld on immunity in tuberculosis were in a sense discouraging ; neither believed in the existence of remedies which attacked the tubercle bacilli in the body, the only remedies which were effective being such as acted on the resistance of the tissues. Friedmann's turtle vaccine did not figure on the programme of the congress, but Klopstock interjected some comments on this remedy, which he had found to be useless in advanced cases, and so uncertain in its action in early cases that the results achieved did not bear out the puffs of its promoters. Wassermann referred to it as not only useless, but dangerous. Another remedy discussed in unflattering terms was the Deycke-Much partial antigen treatment. Neufeld declared that no experimental evidence had yet been produced in favour of the claim that Much's preparations were superior to other tuberculins, and his " partial antigen laws " were, in Neufeld's opinion, quite " up in the air " and bereft of any scientific foundation. Prof. Uhlenhuth's advice was to the effect that research in chemotherapy should be

pursued, as he believed in the possibilities of destroying the tubercle bacillus *in vivo* by chemical agents. On the other hand, the most authoritative speakers adopted a sceptical attitude towards the possibilities of destroying the tubercle bacillus in the body by immuno-biological methods. Perhaps the most useful function of this congress was the opportunity it gave leaders of the medical profession in Germany to chart for the benefit of their colleagues the blind alleys of the problems of tuberculosis.—*The Lancet*, Sept. 3, 1921.

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## DEATH OF TWO GALLANT OFFICERS.

### Capt. W. F. L. Bright, R.A.V.C.

We regret to announce the death of Capt. W. F. L. Bright, R.A.V.C., who was killed by raiders on November 22, 1921, at Zhob, in India, in consequence of the unsettled state of affairs in that country.

Born at Camberwell in 1866, he was educated at Wilson's School, Camberwell, and qualified from the Royal Veterinary College, London, in December, 1907, taking up a commission in the Army Veterinary Corps in September, 1908.

Capt. Bright served in South Africa from December, 1910, to March, 1913, and was seconded for service with the Egyptian Army from March, 1913, until the outbreak of war, when, being on leave in the United Kingdom, he was taken on the strength of the British Army. He proceeded to France with the first Expeditionary Force as veterinary officer to the 3rd Infantry Brigade, arriving in that country on August 13, 1914.

In May, 1915, he returned to England for the purpose of again taking up an appointment with the Egyptian Army, and resumed his duties in Egypt in June, 1915. In 1917 he returned to the United Kingdom and was posted to command the Veterinary Hospital at Romsey. In August, 1917, he was sent to France, being posted to No. 24 Veterinary Hospital. On August 20, 1917, he was appointed D.A.D.V.S. 59th Division, and granted the acting rank of Major. He held this appointment until March 20, 1919, when he was transferred to the Army of the Rhine and appointed D.A.D.V.S. at G.H.Q.

He returned to England in March, 1920, and embarked for a tour of duty in India on April 27, 1920.

Capt. Bright was a very popular officer, and was held in high esteem. He ably carried out all the duties entrusted to him, and was a credit to his Corps.

For his services in the Great War he was twice Mentioned in Despatches and awarded the 1914 Star and the British War and Victory Medals.

We wish to express our deepest sympathy with his relatives, and greatly deplore the loss of so promising an officer.

CAPT. HARRY CHOWNE, R.A.V.C.

*Copy of Telegram.*

*From* Governor, Fashur. Despatched at 5 p.m. on 14-10-21.

*To* Civil Secretary, Khartoum. Received at 6.25 p.m. on 14-10-21.

2,017—1,924. Full report by mail. Brief *resumé* of circumstances of actual fight as follows :—

In anticipation of the attack the Merkaz buildings had been converted into a fort with barbed wire fence. At about 8.30 a.m. enemy with nine flags, numbering about five thousand, advanced in solid phalanx from south ; seven flags attacked the Merkaz on the south side and one attacked it from the west, while the remaining flag, accompanied by horsemen, attacked the town and Suk, which lie to east of Merkaz. By sheer force of numbers, and despite heavy casualties inflicted on them by rifle fire of troops and police, they forced a way into Merkaz square, and defenders, being driven, Chowne emptied his revolver and then seized a rifle, which jammed. He was surrounded and died fighting gallantly in the square. McNeill rallied the retreating troops and police and made a gallant stand, but he and they were forced slowly backward through the fort, and he died one hundred and fifty yards north of it, pierced by four spears. The rebels were now in possession of the fort and set fire to one of the Merkaz buildings. Yuzbashi Bilal Rizk and Muawin Hassan Mohammed Zein collected a post of mounted infantry which had been placed in a zariba outside fort to east to protect Suk, and, returning with them to fort, took enemy in rear and drove him out in confusion. Troops and police who had been retreating then rallied and returned to fort. Rebels attacked again under leadership of Abdullahi himself and advanced to within thirty yards of the fort, where he was hit and fell from his horse. He was carried off by his followers. Mounted Arab friendlies stationed on wings then dashed in and scattered remainder of rebels, who fled, being pursued and cut up.

The gallant stand made by a mere handful of troops and police against overwhelming odds was, I consider, largely due to the magnificent example of bravery set by McNeill and Chowne. After their deaths, what would have been a great disaster was averted, and the position retrieved by the pluck and resource of the two native officers mentioned above.

## Review.

AUTOBIOGRAPHICAL AND OTHER NOTES BY A WEST-COUNTRY VETERINARY SURGEON, 1902. By P. G. BOND, M.R.C.V.S., 105, Union Street, Plymouth. (Bowering & Co., St. Andrew's Printing Works, George Street, Plymouth.) Price 7s. 6d.

People do not often read Disraeli's works to-day. It is a pity. The author gives a reason for the birth of his book in a quotation from "Contarini Fleming": "Read no history, nothing but biography, for that is life without theory."

The volume of 159 pages gives a very interesting account of a veterinary surgeon's life up to 50 years of age. Mr. P. G. Bond had a full, strenuous and manly career, and he tells in a racy style how he did it. Whether at work or play he seems to have taken as his motto, "Whatsoever thy hand findeth to do, do it with thy might." In early life Mr. Bond was apprenticed to a chemist, a by no means bad foundation for ultimate success as a veterinary surgeon. Whether in the hunting field, rowing or walking he did not forget the physical side of life, whilst socially he took a lively interest in the law, the church and the theatre. The young man going up to one of the veterinary colleges of to-day will find great changes in outlook since Mr. Bond's time, but a perusal of the autobiographical notes will disclose the main principles of life and conduct that largely enable men to rise in the world and get the most and best out of their careers.

"From early morn to dewy eve" the author was hard at work. As a West Country veterinary surgeon his practice must have been immense, as he mentions that in 1902 he had 800 contracts and 1,622 clients on his books.

Professor Robertson, a past principal of the London College, was greatly esteemed by Mr. Bond. He considers him to have been one of the right sort, and writes appreciatively of him. The whole book is full of chatty discourse and comments on matters interesting to students and veterinary surgeons, and just as Mr. Bond thought that "there is no tonic, stimulant, disinfectant, febrifuge, antiseptic or sanitary agent more efficient than pure air," in like manner will the mind of the reader be benefited by a perusal of its pages. G. M.

## Correspondence.

### MISERABLE SALARIES.

*To the Editor of* THE VETERINARY JOURNAL.

SIR,—My attention has been drawn to your comments, in your last issue, on my article in the *Nineteenth Century* relative to the old horse traffic, and to my allegations about the "princely salary of £300 a year" and the unnecessary parsimony of the Ministry of Agriculture in giving their veterinary inspectors such a remuneration.

My strictures were not, of course, directed against the veterinary profession, whose duties towards the animal kingdom, if properly carried out, are deserving of the highest credit, but against a Govern-

ment Department, who estimate the services of a professional man (whose education you say must have cost his parent or guardian at least £1,000) at a figure which many mechanics would refuse with contempt. Especially is it "parsimony" in this instance, because, as you say, and as was verified by questions in the House of Commons, "the fees for examining horses for export in 1920 brought in a total sum of £14,594, whilst the cost of these examinations had only amounted to £4,006. This shows a clear margin of £10,500 of profit on the transaction.

Surely, as I quoted, "the labourer is worthy of his hire"? It must be obvious to any business man that the members of the veterinary profession do not realise this or they would unite to alter it. The remedy lies in their own hands, and, so long as they accept so low a pecuniary value for their services, so long will such salaries be offered, to the great detriment of the profession and its standing.—Yours faithfully,

LAMBOURNE,

Royal Society for the Prevention of Cruelty to Animals. Chairman.

105, Jermyn Street, S.W.1.

November 21, 1921.

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## NOTICES.

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